



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor  
Toni Hardesty, Director

March 11, 2005

**Certified Mail No. 7000 0520 0016 0850 4073**

Tim Jensen  
Busch Agricultural Resources, Inc.  
5755 S. Yellowstone Highway  
Idaho Falls, ID 83402

RE: Facility ID No. 019-00025, Busch Agricultural Resources, Inc., Idaho Falls  
Final Permit Letter Permit No. P-040520

Dear Mr. Jensen:

The Idaho Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) Number P-040520 for Busch Agricultural Resources in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho). This permit is effective immediately and is based on your permit application received on August 4, 2004. This permit modifies PTC No. P-030539, issued October 26, 2004, which the terms and conditions are no longer in effect.

This permit does not release Busch Agricultural Resources from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

A representative of the Idaho Falls Regional Office will contact you regarding a meeting with DEQ to discuss the permit terms and requirements. DEQ recommends the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Dan Pitman at (208) 373-0500 to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Martin Bauer, Administrator  
Air Quality Division

MB/DP/sd  
Enclosures

Permit No. P-040520



**Air Quality**  
**PERMIT TO CONSTRUCT**  
**State of Idaho**  
**Department of Environmental Quality**

**PERMIT NO.:** P-040520

**FACILITY ID NO.:** 019-00025

**AQCR:** 61

**CLASS:** A

**SIC:** 2083

**ZONE:** 12

**UTM COORDINATE (km):** 413.5, 4809.4

**1. PERMITTEE**

Busch Agricultural Resources, Inc.

**2. PROJECT**

Add Dust System 800 and Kiln 3 vacuum system

**3. MAILING ADDRESS**

5755 S. Yellowstone Highway

**CITY**

Idaho Falls

**STATE**

ID

**ZIP**

83402

**4. FACILITY CONTACT**

Kirk Krause

**TITLE**

Environmental Engineer

**TELEPHONE**

(314) 577-7629

**5. RESPONSIBLE OFFICIAL**

Tim Jensen

**TITLE**

Plant Manager

**TELEPHONE**

(208) 522-5501

**6. EXACT PLANT LOCATION**

5755 S. Yellowstone Highway

**COUNTY**

Bonneville

**7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**

Production of barley malt

**8. GENERAL CONDITIONS**

This permit is issued according to IDAPA 58.01.01.200, *Rules for the Control of Air Pollution in Idaho*, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit is not transferable to another person, place, or piece or set of equipment. This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes of design or equipment may require DEQ approval pursuant to the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.200, et seq.

  
TONI HARDESTY, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL QUALITY

**DATE ISSUED:** March 11, 2005

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## Acronyms, Units, And Chemical Nomenclature

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gr	grain (1 lb = 7,000 grains)
gr/dscf	grains per dry standard cubic foot
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
NO <sub>x</sub>	nitrogen oxides
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-040520****Permittee:** Busch Agricultural Resources, Inc.**Facility ID No.****Date Issued:** March 11, 2005**Location:** Idaho Falls, ID

019-00025

**1. PERMIT TO CONSTRUCT SCOPE*****Purpose***

1.1 The purpose of this permit is to:

- allow the expansion of capacity of the existing malt load-out facility to 320 tons of malt per hour,
- allow the expansion of the capacity of the byproduct load-out facility 538 tons per hour,
- increase the permitted hourly PM and PM10 emissions from the load-out operations, and
- change the load-out baghouse PM control efficiency rating from 97% to 99%.

1.2 This permit to construct (PTC) replaces PTC No. P-030539, issued October 26, 2004, the terms and conditions of which no longer apply.

1.3 The following is a chronological history of the permits issued at this facility which are no longer in effect:

- PTC No. P-030506, issued September 5, 2003
- PTC No. 019-00025, issued April 30, 2002
- PTC No. 0260-00025, issued December 29, 1993
- PTC No. 0260-00025, issued August 5, 1993
- PTC No. 0260-00025, issued March 12, 1991
- PTC No. 0260-00025, issued October 2, 1990
- PTC No. 0260-00025, issued April 10, 1989

***Regulated Sources***

Table 1.1 lists all sources of regulated emissions in this PTC.

**Table 1.0 REGULATED EMISSIONS SOURCES**

	Source Description	Emissions Control(s)
2	Malt Drying and Sulfuring - Kilns No. 1, 2, 3 East, and 3 West	None
3	Natural Gas Boilers No. 1, 2, and 3	None
4	Barley and Malt Unloading, Handling, and Loadout	Baghouses (10)

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-040520**

<b>Permittee:</b> Busch Agricultural Resources, Inc.	<b>Facility ID No.</b>	<b>Date Issued:</b> March 11, 2005
<b>Location:</b> Idaho Falls, ID	019-00025	

**2. MALT DRYING AND SULFURING IN NATURAL GAS-FIRED KILNS (KILN NO. 1, 2, 3 EAST, AND 3 WEST)**

(Note: The October 28, 2003 PTC application refers to Kiln No. 3 and 4. The current reference is Kiln No. 3 East and 3 West.)

**2.1 Process Description**

In the kiln, the green malt is dried. The kilns are heated using indirect-fired natural gas burners. Heated air is recovered after passing through the kilns using a heat recovery unit. The drying process is a batch process requiring approximately 24 hours for completion of the drying cycle.

Each batch of green malt undergoes a sulfuring treatment once during the drying cycle. The sulfuring treatment process bleaches and brightens the malt kernel. Sulfuring is accomplished by burning sulfur and allowing the SO<sub>2</sub> formed to contact the malt during the drying process.

Emissions from the steeping, germination and drying process include particulate from malt handling, all criteria pollutants from burning natural gas and SO<sub>2</sub> from sulfuring.

Kiln 3 East and West have six natural-gas burners. There are a total of six exhaust stacks associated with Kiln 3 East and West, one stack for each burner. There is a pre-heater exhaust stack and two burner exhaust stacks associated with the East and West sides of Kiln 3.

**2.2 Control Description**

Due to the low emission rates and large exhaust volumetric air flow rates, there are no air pollution control devices on the kiln exhausts.

***Emissions Limits*****2.3 Emissions Limits**

- 2.3.1 Particulate matter (PM) emissions from the gas-fired kiln burners shall not exceed 0.015 grains per dry standard cubic foot (gr/dscf) of effluent gas adjusted to 3% oxygen by volume; in accordance with IDAPA 58.01.01.675.
- 2.3.2 The PM, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compound (VOC) emissions resulting from natural gas burning shall not exceed any corresponding emission rate limits listed in Table 2.0 of this permit.
- 2.3.3 PM, PM<sub>10</sub>, and SO<sub>2</sub> emissions resulting from process operations in the each of the kilns and exhausting from the kiln stacks shall not exceed any corresponding emission rate limits listed in Table 2.0.

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-040520****Permittee:** Busch Agricultural Resources, Inc.**Facility ID No.****Date Issued:** March 11, 2005**Location:** Idaho Falls, ID

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**Table 2.0 KILN EMISSIONS LIMITS<sup>1</sup>**

Source Description	PM		PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		VOC		CO	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Kilns 1, 2, 3 East, and 3 West NG <sup>2</sup>	2.28	7.76	2.28	7.76	0.18	0.60	29.92	102.0	1.65	5.60	25.13	85.7
Kilns 1, 2, 3 East, and 3 West Process <sup>3</sup>	17.1	74.9	15.3	67.0	192.0	95.0						

<sup>1</sup> The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.<sup>2</sup> Limits are for all kiln burner natural gas combustion emissions combined.<sup>3</sup> Limits are for all kiln process emissions combined.**2.4 Opacity Limit**

Emissions from each of the kiln stacks (Kilns No. 1, 2, 3 East, and 3 West), or any other stack, vent, or functionally equivalent opening associated with the kilns, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

**Operating Requirements****2.5 Throughput Limits**

- 2.5.1 The maximum annual natural gas throughput for Kilns No. 1, 2, 3 East, and 3 West shall not exceed 2,040 million standard cubic feet in any consecutive 12-month period.
- 2.5.2 The maximum annual amount of malt dried in the kilns shall not exceed 404,700 tons per year (T/yr) in any consecutive 12-month period.
- 2.5.3 The maximum annual sulfur consumption rate from all kilns (Kilns No. 1, 2, 3 East, and 3 West) shall not exceed 95 T/yr in any consecutive 12-month period.

**2.6 Reasonable Control of Fugitive Emissions**

All reasonable precautions shall be taken to prevent PM from becoming airborne. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations; covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts; paving of roadways and their maintenance in a clean condition, where practical.

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- Prompt removal of earth or other stored material from streets, where practical.

### ***Monitoring and Recordkeeping Requirements***

#### **2.7 Throughput Monitoring**

The permittee shall monitor and record the amount of natural gas burned in Kilns No. 1, 2, 3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

The permittee shall monitor and record the amount of malt dried in Kilns No. 1, 2, 3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

The permittee shall monitor and record the amount of sulfur burned in Kilns No. 1, 2, 3 East, and 3 West combined on a monthly basis. Each month, the permittee will compile the monthly records into a rolling sum for the most recent 12-month period. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

#### **2.8 Visible Emissions Monitoring**

The permittee shall conduct a monthly inspection of any point of emission during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

### ***Reporting Requirements***

#### **2.9 Certification of Documents**

All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.



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<b>Location:</b> Idaho Falls, ID	019-00025	

**3. THREE NATURAL GAS BOILERS (BOILER NO. 1, 2, AND 3)****3.1 Process Description**

Utility operations include the operation of three natural gas-fired boilers. The boilers provide steam for the malting-process equipment and heat for the buildings at the facility. All three boilers exhaust through a common stack.

**3.2 Control Description**

There are no air pollution control devices on the exhaust stack for the boilers.

**3.3 Stack Specifications**

The general exhaust characteristics for boilers are:

Height: 102 feet

Diameter: 3.5 feet

**Emission Limits****3.4 Emissions Limits**

3.4.1 The PM emissions from the gas-fired boilers exhaust which vent to the boiler stack, shall not exceed 0.015 gr/dscf of effluent gas adjusted to 3% oxygen by volume in accordance with IDAPA 58.01.01.675.

3.4.2 The PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC emissions resulting from natural gas burning and exhausting from the boilers shall not exceed any corresponding emission rate limits listed in Table 3.1.

**Table 3.1 BOILERS 1, 2, AND 3 EMISSIONS LIMITS**

Source Description	PM		PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		VOC		CO	
	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>
S10 (Boilers 1-3)	0.68	1.08	0.68	1.08	0.05	0.08	9.00	14.15	0.50	0.78	7.56	11.89

<sup>1</sup> The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

**3.5 Opacity Limit**

Emissions from Boiler No. 1, 2, and 3, or any other stack, vent, or functionally equivalent opening associated with the boilers, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60 minute periods. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

**Operating Requirements****3.6 Throughput Limits**

The maximum annual combined throughput for Boilers No. 1, 2, and 3 shall not exceed 283 million cubic feet in any consecutive 12-month period.

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<b>Location:</b> Idaho Falls, ID	019-00025	

***Monitoring and Recordkeeping Requirements*****3.7 Throughout Monitoring**

The permittee shall monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 as specified in 40 CFR 60.48.c(g) or an approved alternative method to demonstrate compliance with Permit Condition 3.4 and 3.6. The permittee shall monitor and record the amount of natural gas combusted in Boilers No. 1, 2, and 3 each month and for the most recent 12-month period. Records of this information shall remain on site for the most recent five-year period and shall be made available to DEQ representatives upon request.

***Reporting Requirements*****3.8 Certification of Documents**

All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

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**4. BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT**

**4.1 Process Description**

**4.1.1 Stack S01 - System 100 - Barley Unloading and Byproduct Loadout**

Barley is delivered to the plant by truck or railcar. For truck deliveries, the truck is driven into the shipping and receiving building, and the grain is dumped into the truck-receiving hopper. During and after dumping the grain, a drag conveyor removes the grain from the truck-receiving hopper to an elevator from which it is transferred to the storage silos. For rail receiving, the car is moved into position over the rail-receiving hopper and the grain is discharged into the hopper. Drag conveyors transport the grain to an elevator system which ties into the silo-loading system.

Byproducts are transported from storage silos to the load-out conveyors. Most of the byproducts are loaded onto trucks using a large hood to control emissions. A small amount of byproducts are loaded into closed hopper railcars.

**4.1.2 Stack S02 - System 200 - Malt and Byproduct Loadout**

System 200 includes the malt and barley conveyors, elevators and spouts. Clean malt and byproducts are transported by conveyor from the storage silos to the railcar and truck loading conveyors. The majority of the malt is loaded into closed-hopper railcars, and the remaining malt is loaded into trucks. This system also serves several elevators, elevator boots, and drag conveyors.

**4.1.3 Stack S03 - System 300 - In-house Handling of Barley and Malt**

System 300 controls emissions from the malt and barley conveyance within the facility by a series of enclosed conveyors, elevators, and spouts. This includes the storage silo loading system, the silos, the kiln malt storage bins, and the shipping malt storage bin.

**4.1.4 Stack S04 - System 400 - Barley Cleaning, Grading, and Associated Handling**

System 400 controls emissions from the barley-cleaning system and associated handling. The barley-cleaning system receives barley from storage silos via an enclosed elevator. The cleaning and grading system is headed by a garner grain bin, which is filled from the elevator leg. From the garner bin the grain drops to a grain cleaner. The cleaner screens off shorts that are discharged to a portable open container. The cleaner also aspirates dust and separates chaff and other materials. From the grain cleaner, the grain is directed to cylinder separators for length grading. The barley is elevated to steeping or to storage. The byproducts are routed to the feed bins and are removed from the facility via the malt load-out system.

**4.1.5 Stack S05 - System 500 - Graded Barley Transfer to Malt House**

System 500 controls emissions from the graded barley transfer to germination where steeping and germination processes occur. Barley transfer to steeping is accomplished by one of two elevators. From the garners, barley is discharged through aspirators to one of two conveyors, which feed grain to the steep tanks. A manually-operated diverter determines which tank will receive the barley.

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**4.1.6 Stack S06 - System 600 - Dry Malt Cleaning, Storage, and Associated Handling**

System 600 controls emissions from malt cleaning, storage, and malt handling. In these processes kiln malt is delivered by enclosed conveyors from the kiln to the kiln malt hopper. From this hopper, the malt is routed to two malt cleaners to remove the sprouts. The cleaned malt is routed to an elevator, which delivers it to the storage silos.

**4.1.7 Stack S07 - System 700 - Pneumatic Transfer of Dust from Baghouse (Systems 100-600)**

System 700 controls emissions from the pneumatic transfer system used to transport the dust collected by the dust collection systems (System 100 through 600) and the facility sprout-cleaning system.

**4.1.8 Stack DS8 - System 800 - Germination Towers Barley Handling and Kiln 3 (east and west) Malt Handling**

System 800 controls emissions from the handling of graded barley at the germination towers and Kiln 3 (east and west) and the handling of malt from Kiln 3 (east and west) back to the headhouse for storage/cleaning. Emissions due to the transfer of graded barley from the daybin elevator to the barley daybin located at the germination towers are controlled by this dust system. In addition, emissions due to the transfer of barley from the barley daybin to the barley washer via screw conveyor are controlled by System 800.

System 800 also controls emissions from the transfer of malt from Kiln 3 (east and west) to the malt leg transfer conveyor via the kiln unloading drag conveyor. Emissions from the transfer of malt from the Kiln 3 (east and west) malt leg transfer conveyor to the kiln malt daybin and the transfer out of the daybin to the headhouse return conveyor are also controlled by System 800.

**4.1.8 Stacks S11 and S12 - Vacuum-Cleaning Systems (Headhouse and Kiln)**

The facility has three vacuum systems at the plant used for cleaning of the grain-handling areas. The first is for cleaning the head house and the second is located in the Kiln (1 and 2 ) building. The third vacuum system was installed in the Kiln 3 (east and west) building for use there. The expansion of this system includes areas around the daybins and the bridge. The vacuum systems are controlled using baghouses similar to the other dust control systems used at the facility.

**4.2 Control Description****4.2.1 System 100**

The emissions from the barley unloading station are controlled by the System 100 baghouse with an estimated capture efficiency of 85% and a PM<sub>10</sub> removal efficiency of 99%. The associated transfer operations are totally enclosed, and the emissions from transfer are vented into the System 100 baghouse.

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**4.2.2     System 200**

The emissions from the malt loading systems are controlled by the System 200 baghouse with an estimated capture efficiency of 85% and a PM<sub>10</sub> removal efficiency of 99%. The associated transfer operations are totally enclosed, and the emissions from malt and barley transfer and malt load-out are vented into the System 200 baghouse.

**4.2.3     System 300**

The emissions from the malt and barley transfer systems are controlled by the System 300 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

**4.2.4     System 400**

The emissions from the barley cleaning, grading and associated handling systems are controlled by the System 400 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

**4.2.5     System 500**

The emissions resulting from the graded barley transfer systems are controlled by the System 500 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

**4.2.6     System 600**

The emissions resulting from the dry malt cleaning, storage and transfer systems are controlled by the System 600 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

**4.2.7     System 700**

The emissions resulting from the pneumatic transfer of dust from other baghouse systems are controlled by the System 700 baghouse with a capture efficiency of 100% and a PM removal efficiency of 97%.

**4.2.8     System 800**

The emissions resulting from the transfer and handling of the following operations are controlled by the System 800 baghouse with a PM<sub>10</sub> control efficiency of 99.5%:

- Barley elevator to daybin
- Barley daybin to washer
- Malt kiln to leg transfer
- Malt kiln leg
- Malt daybin
- Malt daybin unloading

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-040520**

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<b>Location:</b> Idaho Falls, ID	019-00025	

**4.2.9 Vacuum-Cleaning Systems**

The emissions resulting from the vacuum-cleaning systems for the headhouse and the kiln are controlled by the MAC separator which houses both a cyclone and a baghouse in series. The systems have a capture efficiency of 100% and a PM removal efficiency of > 99%.

**Table 4.1 BARLEY AND MALT UNLOADING, HANDLING, AND LOADOUT DESCRIPTION**

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Barley unloading station	System 100 baghouse	Stack S01
Malt loading systems	System 200 baghouse	Stack S02
Malt and barley transfer systems	System 300 baghouse	Stack S03
Barley cleaning, grading and associated handling systems	System 400 baghouse	Stack S04
Graded barley transfer systems	System 500 baghouse	Stack S05
Dry malt cleaning, storage and transfer systems	System 600 baghouse	Stack S06
Pneumatic transfer of dust from other baghouse systems	System 700 baghouse	Stack S07
Barley and malt handling	System 800 baghouse	DS8
Headhouse and kiln vacuum-cleaning systems	MAC separator, including cyclone and baghouse in series	Stack S11 and Stack S12

**Emission Limits****4.3 Emissions Limits**

In accordance with 40 CFR 60 Subpart DD, the PM emissions from the truck unloading station, truck loading station, railcar loading station, railcar unloading station and all grain handling operations as defined by 40 CFR 60.301 shall not exceed 0.01 gr/dscf. PM and PM<sub>10</sub> shall not exceed any applicable emission rate limit listed in the values listed in Table 4.2.

**Table 4.2 BARLEY AND MALT HANDLING EMISSIONS LIMITS**

Source Description	PM		PM <sub>10</sub>	
	lb/hr	T/yr <sup>1</sup>	lb/hr	T/yr <sup>1</sup>
S03	0.75	0.77	0.42	0.43
S04	2.49	10.89	2.21	2.95
S05	0.16	0.40	0.09	0.22
S06	3.48	15.26	3.48	2.73
S07	0.05	0.20	0.01	0.02

<sup>1</sup> The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

**4.4 Opacity Limit**

Point sources of visible emissions from grain handling operations, truck loading and unloading of grain, railcar loading and unloading of grain shall not exceed 0% opacity in accordance with 40 CFR 60 Subpart DD. Opacity shall be determined by the procedures contained in 40 CFR 60 Subpart DD.

**4.5 Visible Emission Limits**

Visible fugitive emissions shall not exceed the following limits:

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- 4.5.1 5% opacity for an individual truck and railcar unloading station in accordance with 40 CFR 60 Subpart DD.
- 4.5.2 10% opacity from an individual truck loading station in accordance with 40 CFR 60 Subpart DD.
- 4.5.3 0% opacity for the grain handling system in accordance with 40 CFR 60 Subpart DD.

***Operating Requirements*****4.6 Throughput Limits**

The maximum annual barley unloaded at the facility shall not exceed 16 million bushels per any consecutive 12-month period.

**4.7 Baghouse Operation**

Maintenance of the baghouses shall be performed if visible emissions exceeds 0% opacity. The pressure drop across the baghouses shall be maintained within manufacturer and operation and maintenance (O&M) manual specifications. Documentation of the operating pressure drop specifications for the baghouse shall remain onsite at all times and shall be made available to DEQ representatives upon request.

**4.8 Reasonable Control of Fugitive Emissions**

All reasonable precautions shall be taken to prevent PM from becoming airborne. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical,
- Prompt removal of earth or other stored material from streets, where practical.

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***Monitoring and Recordkeeping Requirements*****4.9 Performance Tests**

- 4.9.1 Within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after initial startup after issuance of Permit to Construct No. 019-00025, issued April 30, 2002, the permittee shall conduct performance tests to measure PM and opacity from stacks S04 and S06 in accordance with 40 CFR 60.14.
- 4.9.2 For new or modified facilities, within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after initial startup, the permittee shall conduct performance tests to measure opacity of fugitive emissions for the new or modified sources subject to 40 CFR 60, Subpart DD.
- 4.9.3 For any new or modified affected facility subject to 40 CFR 60 Subpart DD, the permittee shall record the following information:
- Date of initial startup
  - Date of achieving maximum production rate
  - Date test conducted

Records of this information shall be kept onsite and made available to DEQ representatives upon request.

- 4.9.4 The initial performance tests, and any subsequent performance tests conducted to demonstrate compliance, shall be performed in accordance with IDAPA 58.01.01.157, General Provision 6 of this permit, and the following requirements:
- The static pressure drop across the baghouse shall be monitored and recorded during each performance test.
  - The throughput to the affected source(s) shall be recorded in pounds per hour (lb/hr) during each performance test.

**4.10 Throughput Monitoring**

The permittee shall monitor and record the amount of barley unloaded on a monthly basis. Each month, the permittee will compile the daily records into a monthly sum and record the barley unloaded for that month and for the most recent 12-month period. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

**4.11 Visible Emissions Monitoring**

The permittee shall conduct a monthly inspection of any point of emission during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum



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of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

**4.12 Monitor Operating Parameters**

The pressure drop across the baghouses shall be monitored and recorded on a weekly basis. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

**4.13 Operations and Maintenance Manual Requirements**

The permittee shall have an O&M manual for the baghouses, which describes the procedures that will be followed to comply with General Provision 2 and the manufacturer specifications for the air pollution control device. This manual shall remain onsite at all times and shall be made available to DEQ representative upon request.

**4.14 Fugitive Dust Monitoring**

The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive emission inspection. The records shall, at a minimum, include the date of each inspection and a description of the following:

- the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed);
- any corrective action taken in response to the fugitive emissions; and
- the date the corrective action was taken.

***Reporting Requirements*****4.15 Certification of Documents**

All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

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**4.16     Performance Test Protocol**

The permittee is strongly encouraged to submit a test protocol for the performance tests required in Permit Conditions 4.9.1 and 4.9.2 to DEQ for approval at least 30 days prior to the test days.

**4.17     Performance Test Report**

The permittee shall submit a report of the results of the performance tests required in Permit Conditions 4.9.1 and 4.9.2, including all required process data, to DEQ within 30 days after the date on which the stack sampling is concluded.

**4.18     Notification**

The permittee shall furnish to DEQ and the EPA Region 10 office written notification for new or modified equipment subject to 40 CFR 60, Subpart DD as follows:

- A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days nor less than 30 days prior to such date.
- A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
- A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change.

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## 5. SUMMARY OF EMISSIONS LIMITS

Table 5.1 provides a summary of all emissions limits required by this permit:

**Table 5.1 SUMMARY OF EMISSIONS LIMITS**

Busch Agricultural Resources, Inc. Idaho Falls Malt Plant Emissions Limits <sup>a</sup> - Hourly (lb/hr) and Annual <sup>b</sup> (T/yr)												
Source Description	PM		PM <sub>10</sub> <sup>c</sup>		SO <sub>2</sub>		NO <sub>x</sub>		VOC		CO	
	lb/hr	T/yr <sup>f</sup>	lb/hr	T/yr <sup>f</sup>	lb/hr	T/yr <sup>f</sup>	lb/hr	T/yr <sup>f</sup>	lb/hr	T/yr <sup>f</sup>	lb/hr	T/yr <sup>f</sup>
S03	0.75	0.77	0.42	0.43								
S04	2.49	10.89	2.21	2.95								
S05	0.16	0.40	0.09	0.22								
S06	3.48	15.26	3.48	2.73								
S07	0.05	0.20	0.01	0.02								
S10 (Boilers 1-3)	0.68	1.08	0.68	1.08	0.05	0.08	9.00	14.15	0.50	0.78	7.56	11.89
Kilns 1, 2, 3 East, and 3 West NG <sup>d</sup>	2.28	7.76	2.28	7.76	0.18	0.60	29.92	102.0	1.65	5.60	25.13	85.7
Kilns 1, 2, 3 East, and 3 West Process <sup>e</sup>	17.1	74.9	15.3	67.0	192.0	95.0						
Totals	27.0	111.24	24.43	82.19	192.2	95.7	38.9	116.2	2.15	6.39	32.73	97.6

<sup>a</sup> As determined by a pollutant-specific EPA reference method, DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

<sup>b</sup> As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emissions rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates. The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

<sup>c</sup> Includes condensibles.

<sup>d</sup> Limits are for all kiln burner natural gas combustion emissions combined.

<sup>e</sup> Limits are for all kiln process emissions combined.

<sup>f</sup> The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

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**6. PERMIT TO CONSTRUCT GENERAL PROVISIONS**

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the *Rules for the Control of Air Pollution in Idaho*. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq., and the permittee is subject to penalties for each day of noncompliance.
2. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.
3. The permittee shall allow the Director, and/or the authorized representative(s), upon the presentation of credentials:
  - To enter, at reasonable times, upon the premises where an emissions source is located, or in which any records are required to be kept under the terms and conditions of this permit.
  - At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and require stack compliance testing in conformance with IDAPA 58.01.01.157 when deemed appropriate by the Director.
4. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.
5. The permittee shall notify DEQ, in writing, of the required information for the following events within five working days after occurrence:
  - Initiation of Construction - Date
  - Completion/Cessation of Construction - Date
  - Actual Production Startup - Date
  - Initial Date of Achieving Maximum Production Rate - Production Rate and Date
6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

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All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

7. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
8. In accordance with IDAPA 58.01.01.123, all documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.